84738

S/055/60/000/004/005/007XX
C111/C222

On Non-Homogeneous Equations of Infinite Order in a Generalized Derivative

Theorem 3: Let $\phi(z) = \sum_{k=0}^{\infty} \alpha_k z^k$ be an entire function of finite order ϱ_0 and of normal type σ_0. If $\varrho_0 > \varrho$, then there exists a particular solution of (11) being an entire function the order of which is not greater than ϱ_0; if $\varrho_0 \leq \varrho$, then there exists a solution with the order $\leq \varrho$.

Theorem 3': Let $\phi(z) = \sum_{k=0}^{\infty} \alpha_k z^k$ be an entire function of the order ϱ_0 and of maximal type. If then $\varrho_0 > \varrho$, then to every $\varepsilon > 0$ there exists a solution $y(z)$ of (11) so that

$$|y(z)| < e^{|z|^{\varrho_0 + \varepsilon}}, \quad |z| > r_0;$$

but if $\varrho_0 \leq \varrho$, then there exists a solution $y(z)$ so that

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84738

S/055/60/000/004/005/007XX
C111/C222

On Non-Homogeneous Equations of Infinite Order in a Generalized Derivative

$$|y(z)| < e^{|z|^{\beta+\varepsilon}}, \quad |z| > r_0.$$

The author thanks A.O.Gel'fond and A.F.Leont'yev.
There are 5 references: 4 Soviet and 1 Swiss.

ASSOCIATION: Kafedra teorii chisel (Chair of Number Theory)

SUBMITTED: July 3, 1959

Card 5/5

S/193/60/000/006/008/015
A004/A001

9.5140 (also 3702)

AUTHOR: Frolov, Yu.N.

TITLE: The Models ТП -1 (TP-1) and ТП-2 (TP-2) Semiconductor Microcoolers

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 6, pp. 35 - 36

TEXT: The Leningrad Pilot Plant and Special Design and Technology Office for Semiconductor and Ultrasonic Instruments of the Leningrad Sovnarkhoz in cooperation with the Institut poluprovodnikov AN SSSR (Institute of Semiconductors of the AS USSR) developed in 1959 an industrial type TP-1 and TP-2 semiconductor microcoolers intended to reduce the temperature of units of radioelectronic equipment, e.g. germanium crystal rectifiers, photovaristors, inductances, capacitances etc. The operation principle of the devices is identical and based on the utilization of the Peltier effect in semiconductors. The TP-1 device consists of two aluminum cylinders insulated from one another by a foam-plastic bushing. The main part of the cooler is the thermoelectric semiconductor battery composed of 36 hole and electron semiconductors connected in series and filled with the ЭД -6 (ED-6) epoxy resin. The thermobattery has two lead-outs for connecting it to the supply

Card 1/2

S/193/60/000/006/008/015
A004/A001

The Models TM -1 (TP-1) and TM -2 (TP-2) Semiconductor Microcoolers

source. As a result of current passing through the battery, one side of it is heated, the other cooled. The device has a base plate through which the heat is led off into the chassis. The TP-2 cooler is somewhat different from the TP-1 model, above all it is bigger. Besides, the lower part of the outer cylinder has, apart from the two supply lead-outs, another ten lead-outs to connect the device placed in the interior of the cooler. In the interior of the cooler cells can be placed the total power output of which does not exceed 3 - 5 w. The micro-coolers ensure a temperature drop of 23-25°C in a temperature range of the surrounding medium from -20 to +50°C, at a relative humidity of 98% and an atmospheric pressure of 760 - 600 mm Hg. The coolers are supplied from a d-c source of 8 - 12 amp and 1.0 - 1.5 v. The required power is 8 - 18 w. The internal holding capacity of the TP-1 cooler amounts to 75 cm^3, that of the TP-2 is 100 cm^3. The overall dimensions are 80 x 80 x 120 mm and 86 x 100 x 100 mm respectively, while the TP-1 cooler weighs 0.39 kg and the TP-2 cooler 0.4 kg. There are 2 figures.

Card 2/2

11.6500

39877
S/044/62/000/007/020/100
C111/C333

AUTHOR: Frolov, Yu. N.

TITLE: On the solution of an equation of infinite order with respect to generalised derivatives

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 38, abstract 7B189. ("Tr. Matem. in-ta . ANSSSR", 1961, 64, 294-315)

TEXT: Let $F(z)$ be a entire function of the finite order ν, and let D^nF be its generalised derivative of the order n (Matem. sb., 1951, 29, (71) : 3, 477-500), which is generated by an entire function of the order ϱ. In the mentioned paper A. O. Gel'fond and A. F. Leont'yev investigated the equation

$$M(F) = 0 \qquad (1)$$

where $M(F) = \sum_{n=0}^{\infty} c_n D^n F$, where against the characteristic function $\varphi(z) = \sum_{n=0}^{\infty} c_n z^n$ is entire of the order $\varrho_1 \leq \varrho$. Thereby the integral

Card 1/2

On the solution of an equation . . . S/044/62/000/007/020/100
C111/C333

representation of the operator $M(F)$ has been of high importance, which in the case $\sigma_1 > \sigma$ does not exist. Let A be the class of the entire functions of the order ν, where $\frac{1}{\nu} > \frac{1}{\sigma} - \frac{1}{\sigma_1}$. The author constructs for the solution $F(z) \in A$ of (1) under the supposition of $\sigma_1 > \sigma$ a subsequence of partial sums of the series out of particular solutions which formally corresponds to $F(z)$. The subsequence converges uniformly to $F(z)$ in every bounded domain; the speed of the convergence is estimated. In a special case the convergence is proved in a different way by G. D. Troshin (Kzhmat, 1958, 269). For the inhomogeneous equation $M(F) = \varphi(z)$, $\varphi(z) \in A$, one constructs a particular solution $y(z)$; $y(z)$ is an entire function of finite order. If $\nu < \sigma$, then the order of $y(z)$ is not higher than σ; but if $\nu \geq \sigma$, then the order of $y(z)$ is not higher than ν.

[Abstracter's note: Complete translation.]

Card 2/2

FROLOV, Yu.N.

Solution of an equation of infinite order in the uniqueness class. Dokl. AN SSSR 161 no.4:783-784 Ap '65. (MIRA 18:5)

1. Submitted November 3, 1964.

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Solution of an equation of infinite order in the uniqueness class. Izv. AN Azerb. SSR. Ser. fiz.-tekh. i mat. nauk . no.2:26-39 '65. (MIRA 18:8)

FROLOV, Yu.P., prof.zasluzhennyy deyatel' nauki

Behavior of fishes as determined by the function of their sense organs under different ecological conditions. Trud sov.Ikht.kom. no.8:15-22 '58. (MIRA 11:11)

(Sense organs--Fishes) (Fishes--Habits and behavior)

FROLOV, Yu. P. Honored Worker of Science

"The Great Russian Doctors and Teachers - Pirogov, Sechenov, Mechnikov, Lesgaft, and Pavlov," Nauka i Zhizn', No.5, 1948

FROLOV, Yu. P.

USSR/Medicine - Nervous System Aug 48
Medicine - Physiology

"Comparative Physiology of the Higher Nervous Activity and Darwinism," Yu. P. Frolov, Hon Mem Sci, 8 pp

"Nauka i Zhizn'" No 8

Discusses comparative anatomy of the brain in ontophylogenesis, three basic principles of Darwinism and comparative physiology of the upper nervous system, history of studies on instinct and reflex, criticism of so-called zoopsychology, Pavlov and comtemporary knowledge of conditioned and unconditioned reflexes as a basis for studying the evolution of behavior, complex behavior forms from the standpoint of Pavlov's studies of the upper nervous system, and continuation of Pavlov's studies and consummation of Darwinism in one of its most important branches.

38/49T96

FROLOV, Ya. P.

34166. Patofiziologiya bronkhial'noy astmy i drugikh spazmaticheskikh sostoyaniy bronkhov v svete ucheni ya I. P. Pavlova ob uslovnykh reflekskakh. V sb: Problemy Kortiko-vistseral'noy patologii. M., 1949, s. 334-40

SO: Krizhnaya Letopis' No 6, 1955

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"The Discoveries of I. P. Pavlov in the Field of Digestion," Fel'dsher i Akusher, No.2, 1949

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Osnovnyye voprosy evolyutsionnoy fiziologii vysshchyey nyervnoy dyeyatyel'nosti. Byullyetyen' Mosk. o-va. Ispytatyelyey prirody, Otd. Bol., 1949, vyp. 5, S. 147-61, s portr.

SO: Letopis' No. 34

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30500

O nyekotorykh zakonomyernostyakh vtordy signal'nox sistyemy v istoriko-kulturnom osvyeshchyenii. Byallyetyen. Mosk. o-va. I spytatyelyey prirody. Otd. Biol., 1949, Vyp. 5, S. 162-71, s. portr.

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21997 FROLOV, Ya. P. Ivan Petrovich Pavlov. K 100- letiyu so dnya Rozhdeniya. Nauka i zhizn', 1949, No. 6, s. 32-38, s. portr.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

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Snovid, veniya, rasstro,vstva sna, profilaktika i lyechyeniye. (k-100-lyetiyu so dnya rozhdyeniya I.P. Pavlova). Fyel'dshyer i akushyerka, 1949, No. 7, c. 26-30, c Portr.

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23579 PAMYaTI NIKOLAYa ALEKSANDROVICha SEMAShKO. 1874--1949. SOB. PEDAGOGIKA, 1949, No. 7, C. 110-13, S. PORTR.

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17338

Uchyeniye Pavlova o tipakh vyshshoy nyervnoy [illegible], yego bor'ba s Ilyealistichyeskim uchyeniyem o (konstitutsii) organizma. Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenova, 1949, No. 5, s. 25-29, s. portr.

LC: [illegible] TC. A0

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30519

Staryeyshina fiziologov mira. Slavyanye, 1949, No 9, S. 50-52

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27339: FROLOV, YU. PUTI.-Sovetskoy fiziologii. K 100-letiyu so dnya rozhdeniya I.P. pavlova novyy mir, 1949, No. 9, s. 210-17.

SO: Letopis'Zhurnal'nykh Statey, Vol. 47, 1948.

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30518

I. P. Pavlov I tyeoriya sovyetskogo fizichyeskogo vospitaniya. Tyeoriya I pratika fiz. kul'tury, 1949, 1949, vyp. 9, s. 644-51, s portr.

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30939. FROLOV, YU.

Velikiy Uchenyy-Patriot. Smena, 1949, No. 18 s 2-3.

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FROLOV, Yu.N.

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A polemical plea for the materialist trend in physiology in connection with the investigation of cerebral function, as exemplified by the study of conditioned reflexes. Ten Cate - Amsterdam

SO: Excerpta Medica, Section 11 Volume 111 No. 9

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Physiological theory of I. P. Pavlov on time as an original stimulator of the nervous system. Zh. vysshei nerv. deiat. 1 no. 6:831-839 Nov-Dec 1951. (CLML 23:3)

1. Moscow.

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[Hygiene and organization of brainwork in the light of I.P.Pavlov's physiological theories] Gigiena i organizatsiia umstvennogo truda v svete fiziologicheskogo ucheniia I.P.Pavlova. Moskva, Znanie, 1952. 39 p.
(MLRA 6:7)

(Nervous system) (Occupations--Diseases and hygiene)

FROLOV, Yuriy Petrovich, 1892-

From instinct to reason; sketch in the science of behavior. Moskva, Voen, izd-vo, 1952. 115 p. (Nauchno-populiarnaia biblioteka soldata) (53-38508)

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"Pathogenesis of Bronchial Asthma," Pediatriya, No.2, 1952

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[Ivan Petrovich Pavlov; reminiscences] Ivan Petrovich Pavlov; vospominaniia. Izd.2., dop. Moskva, 1953. 286 p. (MLRA 7:3)
(Pavlov, Ivan Petrovich, 1849-1936)

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Conversion of minimum conditioned stimuli and minimum conditioned inhibitors into factual conditioned stimuli. Trudy fiziol. lab. 1 no.1/3:263-270 '53 (MLRA 9:5)

(INHIBITION)

FROLOV, PROF. Yu.

Pavlov, Ivan Petrovich, 1849 1936

I. P. Pavlov's teachings are the pride of Russian science.
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9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.

FROLOV, Yu.P., professor, zaslushennyy deyatel' nauki.

Hygiene in intellectual work. Nauka i zhizn' 20 no.5:31-32 My '53. (MLRA 6:6)

(Mental physiology and hygiene)

FROLOV, Yu.P., professor (Moscow).

Review of the book "Selected works of I.M. Sechenov, I.P. Pavlov, N.E. Vvedenskii 'Physiology of the Nervous System'." Klin.med. 31 no.3:94-96 Mr '53. (MLRA 6:5)
(Nervous system) (Sechenov, Ivan Mikhailovich, 1829-1905) (Pavlov, Ivan Petrovich, 1849-1936) (Vvedenskii, Nikolai Evgen'evich, 1852-1922)

FROLOV, Yu.P. [author]; SMIRNOV, S.N. [reviewer].

Review of IU.P.Frolov's book "Sensory Organs," chapter 5, "Organ of sight and visual estimation." Reviewed by S.N.Smirnov. Vest.oft. 32 no.3:46-47 My-Je '53. (MLRA 6:8)

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[Laboratory manual on the physiology of fish] Laboratornyi praktikum po fiziologii ryb. Moskva, Pishcheprom-izdat, 1955. 89 p.
(Fishes--Laboratory manuals) (MLRA 9:3)

FROLOV, Yuriy Petrovich, 1892-

[Physiology in the service of health; a scientific-popular sketch] Fiziologiia na sluzhbe zdorov'ia. Moskva, Medgiz, 1955. 227 p. (MLRA 9:4)
(PHYSIOLOGY)

FROLOV, Yu.P., zasluzhenyy deyatel'nauki, professor.

Inhalation and halation. Zdorov'e 1 no.5:11-13 My '55. (MLRA 9:3)
(RESPIRATION)

FROLOV, Yu.P., zasluzhennyy deyatel' nauki, professor

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(THIRST)

FROLOV, Yu.P., professor

Vision and technology. Zdorov'e 1 no.10:9 O '55 (MLRA 9:5)

(SIGHT)

FROLOV, Yu.P., prof., zasluzhennyy deyatel' nauki

I.M. Sechenov, great Russian physiologist. Voen.-med.zhur. no.12:75-77 D'55 (MIRA 12:1)
(SECHENOV, IVAN MIKHAILOVICH, 1829-1905)

FROLOV, Yu.P., professor, zasluzhennyy deyatel' nauki.

The great physiologist. Zdorov'e 2 no.2:7-8 F '56 (MLRA 9:5)

(PAVLOV, IVAN PETROVICH, 1849-1936)

FROLOV, Yu.P. (Moskva)

Review of the collection "Problems of comparative physiology and pathology of the higher nervous activity." Fiziol.zhur. 42 no.12: 1081-1083 D '56. (MLRA 10:2)
(NERVOUS SYSTEM)

FROLOV, YU. P.

Mozg Cheloveka i kibernetika [The Human Brain and Cybernetics], Goskul'tprosvetizdat [State Publishing House for Cultural and Educational Literature], Moscow, 1957, 40 pages.

FROLOV, Yuriy Petrovich, zasluzhennyy deyatel' nauki RSFSR, professor; KELER, V.R., nauchnyy redaktor; BREZANOVSKAYA, L.Ya., redaktor; YELAGIN, A.S., tekhnicheskiy redaktor

[The human brain and cybernetics] Mozg cheloveka i kibernetika. Moskva, Gos. izd-vo kul'turno-prosv. lit-ry, 1957. 38 p. (Bibliotechka v pomoshch' lektoru, no.6) (MLRA 10:9)
(CYBERNETICS)

FROLOV, Yu.P., professor, zasluzhennyy deyatel' nauki.

Nerve discovered by Pavlov. Zdorov'e 3 no.4:9-10 Ap '57
(MLRA 10:5)

(HEART--INNERVATION)

3-6-27/29

Frolov, Yu. P.

AUTHOR: Frolov, Yu. P., Professor, Doctor of Biological Sciences

TITLE: A Book Dedicated to the Most Important Discoveries in Physiology (Kniga, posvyashchennaya glavneyshim otkrytiyam fiziologii)

PERIODICAL: Vestnik Vysshey Shkoly, 1957, # 6, pp 92-95 (USSR)

ABSTRACT: The book is a critical review of the "Physiology of Man and Animal" written by K.P.Golysheva and S.I. Gal'perin and approved by the USSR Ministry of Higher Education as a manual for state universities and pedagogical institutes. The book is half the size as the textbook edited by K.M. Bykov but by its size and contents it satisfies the requirements of a manual. He quotes in this connection the renowned Russian scientist I.P. Pavlov. Attention is called to the absence of references to the success of modern electronics, applied in physiology for the oscillographic recording of functions of the organism. In the author's opinion the book, when discussing the process of evolution, should also indicate the reverse process - the degradation of some instincts, the loss of the character of absoluteness by them.

Card 1/2

3-6-27/29

Book Dedicated to the Most Important Discoveries in Physiology

The author calls attention to several other deficiencies of the book, for instance, that the writers point to the thirst center in the nerve system but omit to mention that this center has its highest conditionally reflecting part in the cerebral cortex which sometimes makes the feeling of thirst very illusory. Further, the time when the first conditioned reflex arises in a newborn is given as 1.5 to 2.5 months; however, according to recent experiments of I. A. Bronstein these reflexes arise already in the course of the first day of a newborn. The book will, undoubtedly, be favorably greeted by the Vuz instructors. There are two Russian references.

ASSOCIATION: [illegible] of Philosophy AN USSR (Institut filosofii AN SSSR)

AVAILABLE: Library of Congress

Card 2/2

FROLOV, Yuriy Petrovich, prof., zasluzhennyy deyatel' nauki RSFSR; GAL'PERIN, S.I., red.; LANDAU-TYLKINA, S.P., red.; GABERLAND, M.I., tekhn.red.

[Brain and work; I.P.Pavlov's teaching and problems in scientific organization of work] Mozg i trud; uchenie I.P.Pavlova i voprosy nauchnoi organizatsii truda. Moskva, Gos.izd-vo med.lit-ry, Medgiz, 1960. 181 p. (MIRA 14:1)

(WORK, METHOD OF) (BRAIN)

PHASE I BOOK EXPLOITATION SOV/5045

Frolov, Yuriy Petrovich, Professor, Honored Scientist RSFSR

Mozg i trud; ucheniye I. P. Pavlova i voprosy nauchnoy organizatsii truda (Brain and Work; Teachings of I. P. Pavlov and Problems in the Scientific Organization of Work) Moscow, Medgiz, 1960. 184 p. 25,000 copies printed. (Series: Nauchno-populyarnaya meditsinskaya literatura)

Eds.: S. I. Gal'perin and S. P. Landau-Tylkina; Tech. Ed.: M. I. Gaberland.

PURPOSE: This book is intended for the general reader.

COVERAGE: The author discusses the role of the human nervous system in physical and intellectual work, and the interconnection between both forms of work, in the light of the teachings of I. P. Pavlov on higher nervous activity. Distinctive creative manifestations of the

Card 1/6

human brain under conditions of modern material progress are considered. Some practical conclusions on the organization of efficient and hygienic work are given. The subject matter is based on Pavlov's conception of two signaling systems of reality in the human brain, and embraces chiefly the major types of intellectual work, with its physiology, organization, and hygiene. The author claims that his book partly solves the problem of interrelation between development of the brain and work. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

SHIROKIY, V.F., otv.red.; ANOKHIN, P.K., red. (Moskva); DVOYNINA, A.P., red.; LABUTIN, I.I., red.; LINNIKOV, G.S., red.; ROBINSON, V.Ye., red.; SAKHAROVA, O.S., red.; FROLOV, Yu.P., red. (Moskva)

[Abstracts of reports of the Scientific Conference in Honor of the 110th Anniversary of Ivan Petrovich Pavlov's Birth, 1959] Tezisy dokladov Nauchnoi konferentsii, posviashchennoi 110-i godovshchine so dnia rozhdeniia Ivana Petrovicha Pavlova. Riazan', 1959. 224 p. (MIRA 14:2)

1. Nauchnaya konferentsiya, posvyashchennaya 110-y godovshchine so dnya rozhdeniya Ivana Petrovicha Pavlova, 1959. 2. Kafedra fiziologii Ryazanskogo meditsinskogo instituta imeni akademika I.P.Pavlova (for Shirokiy). 3. Kafedra normal'noy fiziologii Ryazanskogo meditsinskogo instituta imeni akademika I.P.Pavlova (for Dvoynina). 4. Kafedra fiziologii zhivotnykh Ryazanskogo sel'skokhozyaystvennogo instituta imeni P.A.Kostycheva (for Labutin). 5. Dom-muzey akademika I.P.Pavlova, Ryazan' (for Linnikov). 6. Kafedra anatomii i fiziologii Ryazanskogo pedagogicheskogo instituta (for Robinson). 7. Kafedra normal'noy fiziologii Ryazanskogo meditsinskogo instituta imeni akademika I.P.Pavlova (for Sakharova).
(NERVOUS SYSTEM)

FROLOV, Yu.P., prof., zasluzhennyy deyatel' nauki RSFSR (Moskva)

Teachings of Pavlov serve the people. Nauka i zhyttia 10 no. 11:38-41 N '60. (MIRA 14:4)
(Conditioned response) (Pavlov, Ivan Petrovich, 1849-1936)

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"The Dialectics of Living Nature and Modern Cybernetics."

Filosofskiye voprosy kibernetiki (Philosophical Problems of Cybernetics), Publishing House of Socio-Economic Literature, Moscow, 1961 392 p.

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(Vernadskii, Vladimir Ivanovich, 1863-1945)
(Gumilevskii, Lev)

FROLOV, Yu.P., prof.

"Dead point" and "second breath." Priroda 52 no.3:36-39 '63.
(MIRA 16:4)
(RESPIRATION)

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Heroism of a scientist; in memory of Norbert Wiener . Priroda 53 no.7:95-98 '64. (MIRA 17:7)

FROLOV, Yu.P., prof.

Temperament and character. Priroda 5: no.1:50-56 Ja '66.
(MIRA 19:1)

FROLOV, Yu. S.

21(5) PHASE I BOOK EXPLOITATION SOV/1297

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke, Moscow, 1957

Polucheniye izotopov. Moshchnyye gamma-ustanovki. Radiometriya i dozimetriya; trudy konferentsii... (Isotope Production. High-energy Gamma-Radiation Facilities. Radiometry and Dosimetry; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 293 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.

Editorial Board: Frolov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Aglintsev, K.K., Alekseyev, B.A., Bochkarev, V.V., Leshchinskiy, N.I., Malkov, T.P., Sinitsyn, V.I., and Popova, G.L. (Secretary); Tech. Ed.: Novichkov, N.D.

Card 1/12

PURPOSE: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

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PART I. PRODUCTION OF ISOTOPES

Isotope Production

SOV/1297

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This article describes the basic structural features of an ultra-high-temperature ion source and gives the results of its use in separating Pd, Pt, Ru, and Ir in a small electromagnetic separator. A hot cathode discharge is maintained in vapors of the element being separated and isotope ions are drawn from the gas discharge chamber through an aperture. A lateral electron beam with energies of 20-25 kev creates chamber temperatures up to 2800° C.

Isotope Production SOV/1297

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requiring high dosage (microorganisms, biological substrates) c) industrial radiation of biological products requiring sterilization, preservation, disinfection, etc. d) medical and therapeutical purposes.

Breger, A. Kh., V.A. Belynskiy, V.L. Karpov, S.D. Prokudin and V.B. Osipov. Facility for Radiation-Chemical Research Employing Co^{60} Gamma-Radiation Source With an Activity of 21,000 g-ev of Radium 182

A K-20000 Co^{60} gamma-radiation source, cited as the most powerful in the world according to available data, is described and basic parameters tabulated. The unit is provided with a control panel and a system of periodic observation and is capable of 1200 r/sec dosage per 0.4 liters and ~100 r/sec per 100 liters volume. Working chamber capacity is ~300 liters. The source, comprising 56 standard Co^{60} preparations, the authors state, is safe for attending personnel owing to a "dry" method especially developed for this unit.

General description and electric circuit diagrams are given for a pocket-sized radiometer intended for approximate determination of gamma- and hard beta-ray intensities above 1 Mev. Time lapse after onset of radiation registration serves as a parameter for the determination of intensity up to 1000 μr/hr with an accuracy of ± 20 percent. Working principle, components and electric circuit diagram are given for a pocket-size dosimeter capable of detecting approximate intensities of gamma- and beta-radiation from 0.1 to 5000 μr/sec and

Isotope Production (Cont.) SOV/1297

AVAILABLE: Library of Congress

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Card 12/12

FROLOV, Yu.S.

Studying the distortions of equal-area modified cylindrical projections. Vest.LGU 16 no.12:148-157 '61. (MIRA 14:6)
(Map projection)

FROLOV, Yu.S.

Evaluating equal-area projections on the basis of mean square distortion in direction. Vest. LGU 16 no. 6:46-63 '61. (MIRA 14:4)
(Map projection)

Frolov, Yu. S.

PHASE I BOOK EXPLOITATION SOV/4054

Akademiya nauk SSSR. Institut nauchnoy informatsii

Khimicheskaya promyshlennost' SSSR (The Chemical Industry of the USSR) Moscow, Goskhimizdat, 1959. 457 p. Errata slip inserted. 4,100 copies printed.

Sponsoring Agency: USSR. Gosudarstvennyy nauchno-tekhnicheskiy komitet.

Ed.: R. S. Romm; Tech. Ed.: P. V. Pogudkin; Editorial Board: A. P. Vinogradov, S. I. Vol'fkovich, N. M. Zhavoronkov, M. I. Ivanov, V. S. Kiselev, I. A. Lunacharskaya (Scientific Secretary), S. S. Medvedev, B. D. Mel'nik, A. N. Planovskiy, A. Ya. Ryabenko (Chief Ed.), and A. V. Topchiyev.

PURPOSE: This book is intended for the personnel of the chemical industry. It will be of interest to the general reader interested in the development and structure of the Soviet chemical industry.

COVERAGE: This book contains 18 articles on various aspects of the Soviet chemical industry. Among the developments in the production of raw materials for the manufacture of chemical products discussed are: 1) the use of raw materials synthesized from natural gas and petroleum to replace food products in the production of synthetic rubber, alcohol, detergents, etc.; 2) the production of acetylene from natural and petroleum gases for the synthesis of vinyl chloride, acrilonitrile, chloroprene, trichloroprene, 1, 4-butadiene, and other organic substances, based on methods developed by M. G. Kucherov, A.Ye. Favorskiy and others; 3) the production of acetylene from saturated hydrocarbons by cracking methane (and its homologs) at 1450° in an electric arc between two special electrodes in a gas reactor, by pyrolysis (thermal oxidation) of methane in an improved furnace designed by B. S. Grinenko, by high-temperature pyrolysis of propane and butane in tubular furnaces, or by other methods of producing acetylene for the production of synthetic rubber, ethyl alcohol, and other organic substances; 4) the synthesis of halogen derivatives of aliphatic hydrocarbons for the production of solvents, refrigerants, pharmaceutical products, etc., and 5) the production of rubber accelerators from nitrogen-containing aliphatic hydrocarbons. The history of plastics production in the Soviet Union is reviewed, and names, locations, and products of plants as well as the names of outstanding personalities in the field are given. The technical level and prospects of further development of different branches of the plastics industries are also discussed along with methods of manufacturing plastic articles. A special apparatus designed by Ye. M. Mogilevskiy and designated "VA" which permits preparation of viscose solution in one operation is discussed. It is being used to replace the complex, conventional equipment with great savings in space. General trends in the techuology of synthetic fiber production are also discussed. A historical review of synthetic rubber production and the achievements of outstanding Soviet scientists in this field are given as well as names, locations and products of synthetic rubber plants. Rubber production and the manufacture of rubber goods are similarly reviewed. Statistical data and outstanding personalities in the development of the aniline dyes, paints and lacquers, mineral fertilizers, insecticides and fungicides, sulfuric acid, soda, mineral salts, radioactive and stable isotopes, and chemical reagents industries are given. Catalytic processes and automation and automatic devices used in the chemical industry are also discussed. Thirty-eight photographs included in the book show outside and interior views of some Soviet chemical industry plants, as well as their manufacturing, m rial-handling and laboratory equipment. Numerous personalities and facili .es are identified in the body of the text. References accompany individual articles.

SMIRNOV, L.Ye.; FROLOV, Yu.S.

Orientating aerophotos by shades. Vest. LGU 17 no.12:120-125 '62. (MIRA 15:7)
(Photography, Aerial)

FROLOV, Yu.S.

From Claudius Ptolemy to Rigobert Bonn. Vest.LGU 18 no.6: 118-125 '63. (MIRA 16:4)
(Cartography)

RODNYANSKAYA, E.I.; FROLOV, Yu.S.

Contribution of young geographers to science. Vest. LGU 18 no.12: 143-144 '63. (MIRA 16:8)
(Geography)

PERETS, V.A.; FROLOV, Yu.S.

Automation of calculating operations in determining the reserves of mineral raw materials. Razved. i okh. nedr 29 no.9:5-10 S '63. (MIRA 16:10)

FROLOV, Yu.S., kand. geograf. nauk

Comparative evaluation of cartographic projections. Izv. vys. ucheb. zav.; geod. i aerof. no.5:96-103 '64. (MIRA 18:5)

1. Leningradskiy gosudarstvennyy universitet. Rekomendovana kafedroy kartografii.

L 25671-65 EWT(1) GW
ACCESSION NR: AP5001042 S/0307/64/000/003/0120/0125

AUTHOR: Frolov, Yu. S.

TITLE: Analytical formulas for determining the reduced values of geodetic lengths

SOURCE: Leningrad. Universitet. Vestnik. Seriya geologii i geografii, no. 3, 1964, 120-125

TOPIC TAGS: cartography, cartometry, geodesy, reduced length

ABSTRACT: The method of determining the length of curved lines on a map by measuring them with two compasses with spans of different length, in spite of its clumsiness and poor accuracy, has been widely used in the production of cartometric works of considerable volume. Attempts to resolve this problem have led to the proposal of a number of empirical formulas for mathematical determination of the reduced length. The author considers that A. K. Malovichko's formula is not sufficiently accurate (in the junction of two semicircles alone it produces an error of 60") and advises that N. M. Volkov's formula has a better claim to universality. He criticizes all proposals for empirical formulas of this nature for trying to over-simplify the calculations, as this gains very little time and leads to the introduction of serious random errors. He proposes two modified formulas for solution of the problem, and also suggests that some of the functions can be

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L 25671-65
ACCESSION NR: AP5001042

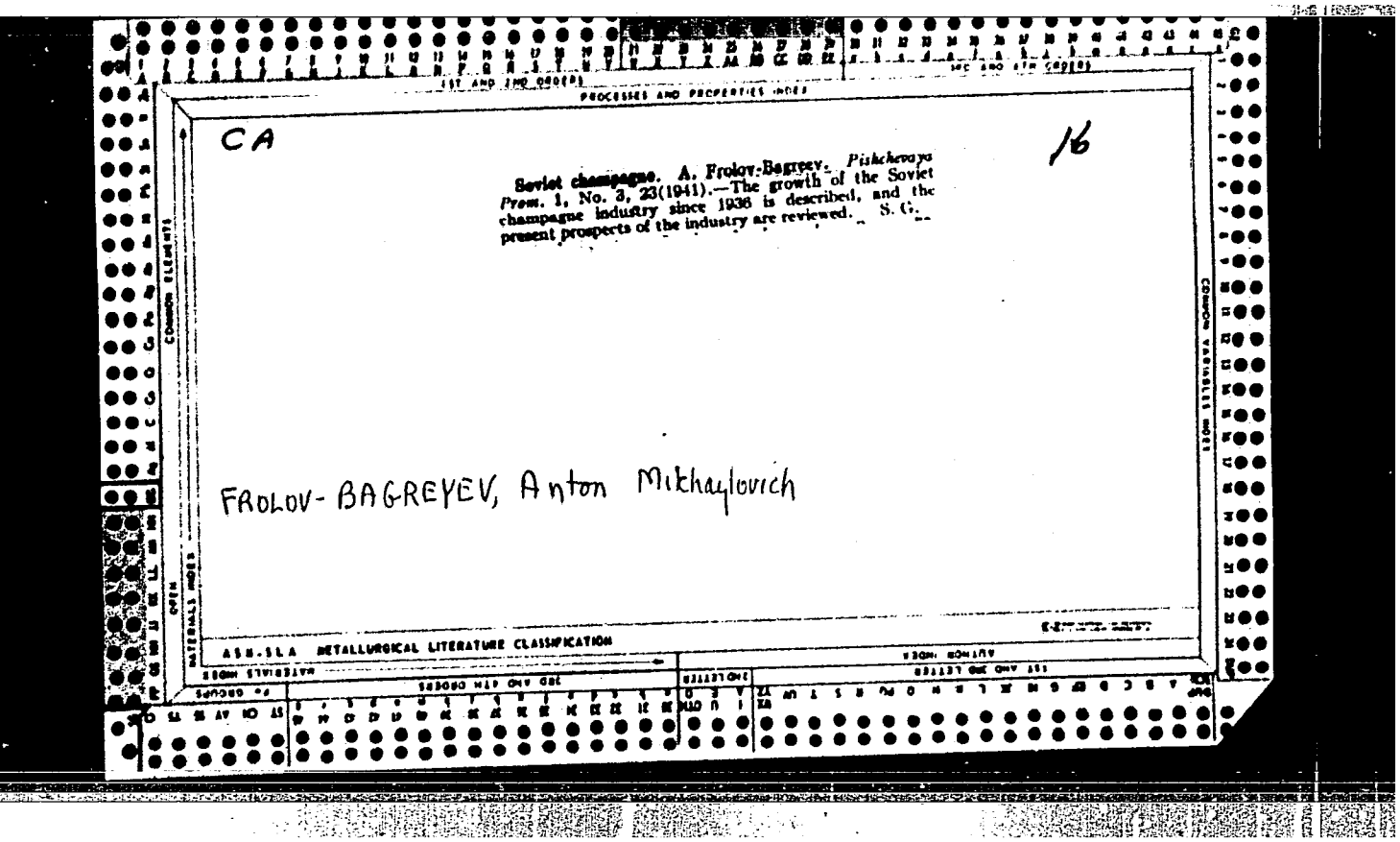
handled better if written in the form of a nomogram. Orig. art. has: 2 figures, 3 tables and 18 formulas.

ASSOCIATION: none

SUBMITTED: 12May64 ENCL: 00 SUB CODE: ES

NO REF SOV: 008 OTHER: 000

Card 2/2



CA

16

Soviet champagne. A. Frolov-Bagreev. *Pishchevaya Prom.* 1, No. 3, 23(1941).—The growth of the Soviet champagne industry since 1936 is described, and the present prospects of the industry are reviewed. S. G.

FROLOV-BAGREYEV, Anton Mikhaylovich

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Anton Mikhaylovich

FROLOV-RAOLEYEV, A. M.

USSR/Medicine - Yeast Oct 1945
Medicine - Fermentation

"Yeast Isolated from the Sherry Film," A. M. Frolov-Raoleyev, N. F. Sayenko, Moscow Central Scientific Research Laboratory of Viniculture, 4 pp

"Mikrobiologiya" Vol XIV, No 5

Spanish sherry film (solera) is a complex of Saccharomycetes, a part of which possesses a strong fermenting ability and forms the film after fermentation while the other part of Hansenula is not able to ferment but possesses etherizing peculiarities in the aerobic phase. When fermentation of wines with pure cultures isolated from solera takes place, the

40T51

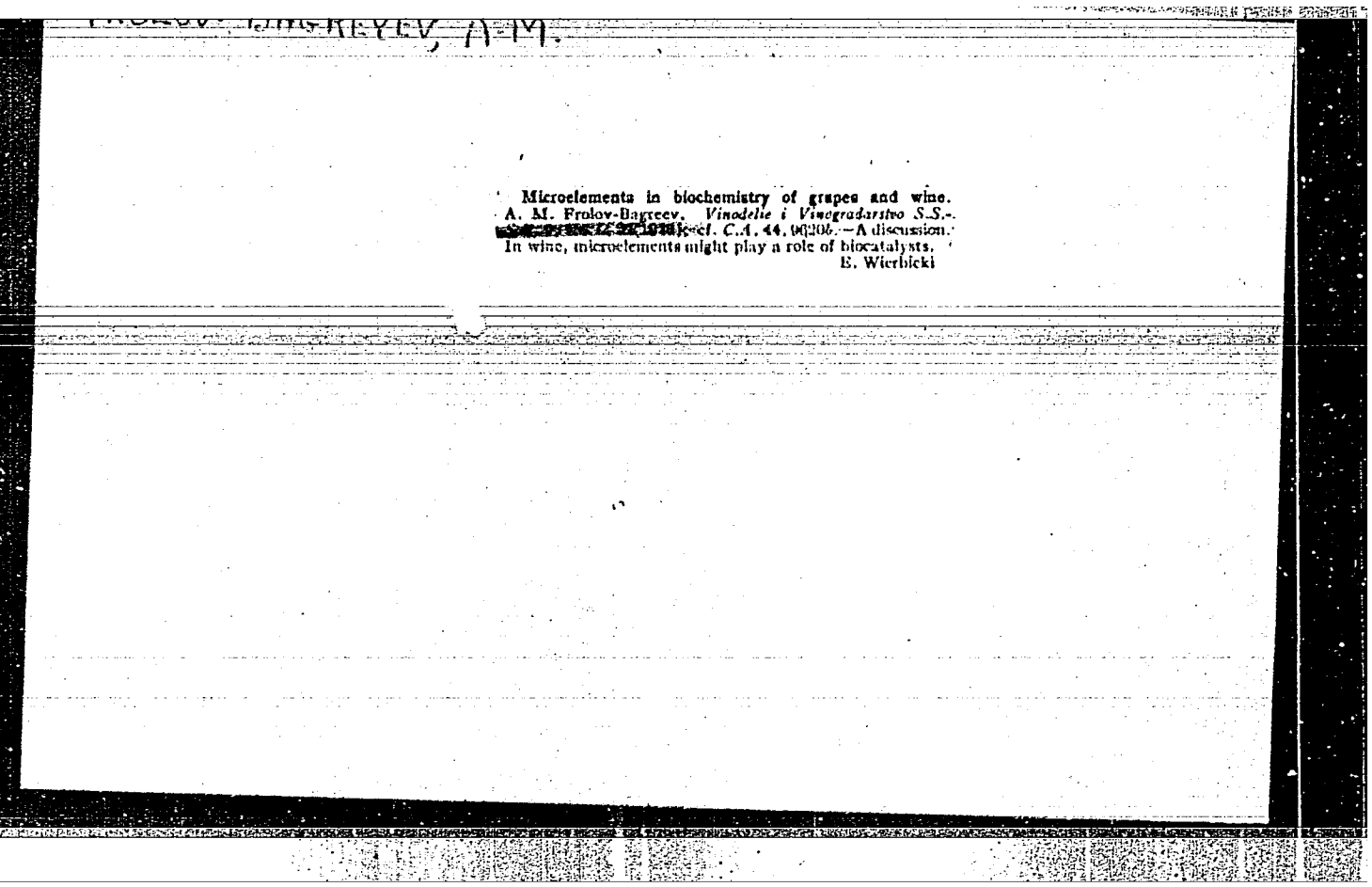
USSR/Medicine - Yeast (Contd) Oct 1945

formed films accumulate acetaldehyde which, although giving a sherry taste, does not show typical taste harmony and bouquet of sherry. Experiments and comparison with other sherry yeasts are described.

40T51

C A

Grape-seed utilization. A. M. Prulov-Bagreev. *Vinodelie i Vinogradarstvo S.S.S.R.* 8, No. 8, 13-16(1948).—Grape seeds at best comprise 20% of the dry wt. (I) of the press cake. I amounts to 20% of the grape production. Av. yield of grape oil (II) from dry seeds is 15%. The best method of recovery is extn. with C_6HCl_3. II is an excellent *lubricant*, and can replace castor oil, particularly in airplane motors. Variations in oil consts. are due to differences in species processed and in stage of ripeness. Sp. gr. ranges from 0.920 to 0.956, f.p. is 13-17°, sapon. no. 178-190, I no. 94-143, nonvolatile fatty acid no. 92-98, volatile fatty acid no. 0.46-0.80, and acetyl no. 2.7-21.6. II is a *semidrying oil* useful in making *dyes*, *lakes*, and *resins*, and as a *butter substitute*. It contains 8-13% palmitic and stearic acids, 80% linolenic and erucic acids, traces of mellisic acid and of two C_{14}-C_{16} hydroxy acids. II is sol. in petr. ether, glacial AcOH, and incompletely sol. in 95% EtOH. Enotannins cannot be recovered satisfactorily from grape seeds. Grape seeds can be used as a *coffee substitute*. Harold J. Oatfield



Microelements in biochemistry of grapes and wine.
A. M. Frolov-Bagreev. *Vinodelie i Vinogradarstvo S.S.-*
[redacted] *Rev. C.A.* 44, 9220*b*.—A discussion.
In wine, microelements might play a role of biocatalysts.
E. Wierbicki

FROLOV-DAGREYEV, A.M.

The importance of microelements in biochemistry of grapes and wines. A. M. Frolov-Bagreev and E. P. Troitskii (All Union Sci. Research Inst. Viticult. and Viticult., "Magarach," Yalta, Crimea). *Biokhim. Vinodeliya, Akad. Nauk S.S.S.R., Sbornik* 3, 53-6(1950).—A discussion (without references). The importance of traces of Cu, Mg, Mn, Co, Fe, and Mo ions for growth and ripening of grapes as well as for the alc. fermentation and aging of wines is pointed out. S. Wierbicki

16

Role of microelements in viniculture. A. M. Frolov-Bagreev and E. G. Andreevskaya (Moscow Technol. Inst. Food Ind.). *Vinodelie i Vinogradarstvo S.S.S.R.* 10, No. 6, 38-40(1950).—Preliminary report on effect of Mn and Mo on wine taste and quality. Table 1 shows general mineral content in 14 different wines of 6 types (mg./l. K_2O, CaO, MgO, Fe_2O_3, Al_2O_3, P_2O_5, SO_3, SiO_2, and Cl, and total salt). Table 2 gives similar data for trace elements, together with a taste index (Mn_2O_3, MoO_3, V_2O_5, TiO_2, B_2O_3, and Ra (in 10^{-11} mg./l.)). It is suggested that trace elements in juice may affect flavor through poisoning of yeast enzyme systems. Work continues on effect of the trace elements on morphology and physiology of various wine-yeast species.

H. Oatfield

FROLOV-BAGREYEV, A.M.

Frolov-Bagreev, Anton IM., and Agabal'yants, G. G.: Khimiya vina. (Wine Chemistry). Moscow: Food Ind. Pub. House. 19-1. 391 pp. NO

(2)

Application of sulfur dioxide during the production of champagne. A. M. Frolov-Bagreev, V. V. Agapov, and N. I. Kalinina. *Vinodelie i Vinogradarstvo S.S.S.R.* 11, No. 7, 22-4(1951).—To samples (in glass bottles) of a raw champagne material, contg. 2.20 mg./l. of free SO_2 and 61.44 mg./l. of bound SO_2, was added 10, 20, 30, 40, 50, 60, 70, and 80 mg. free SO_2/l., resp., and the yeasts were made capable of fermenting sucrose in the presence of SO_2 (the yeasts were grown in a medium to which a new dose of SO_2 was added after the fermentation was restored, after the previous SO_2 addn.). The fermentation proceeded normally until the SO_2 dose was 70 mg./l.; the addn. of 80 mg. SO_2/l. stopped the fermentation entirely. By increasing the addn. of free SO_2, the rate of binding the free SO_2 and the oxidation-reduction potential Eh of the wine were decreased, while the fermentation time, the time between the SO_2 addn. and the fermentation beginning, as well as volatile esters and acids, aldehydes, and glycerol were increased. The best-quality products were obtained by the addn. of 10 and 20 mg. SO_2/l., 20 mg. being the optimal dose. H_2S was not found in any product (it was found only when free S contaminated some of the raw material). The addn. of 20 mg. SO_2/l. was applied also to the reservoir production of champagne to give similar results. The product obtained was superior in quality; its chem. compn., as compared with the control, was the following, values of control in parentheses: free SO_2 2.50 (1.50), bound SO_2 69.5 (59.7), H_2SO_4 both 301.6, aldehydes 73.49 (73.31) mg./l., sugar 3.1 (3.2), alc. 11.3 (11.2) %, titratable acidity 0.8 (6.48), volatile acids 0.60 (0.65), volatile esters 192.7 (188.32), glycerol 7.34 (6.8) g./l., pH 3.05 (3.23), Eh 0.387 (0.3638) mv., and the pressure in the gas chamber of the reservoir 4.05 (4.05) atm. Since the characteristic aldehyde flavor was more pronounced in the control it was concluded that some of the aldehydes in the expti. product were not in free form.

E. Wierbicki

FROLOV-BAGREYEV, A.M., professor, doktor sel'skokhozyastvennykh nauk;
GERASIMOV, M.A., professor, doktor sel'skokhozyaystvennykh nauk.

Principal problems in improving the quality of wine. Trudy MTIPP 2:91-96 '52. (MLRA 9:2)

1.Zasluzhennyy deyatel' nauki i tekhniki RSFSR.
(Wine and wine making)

PROLOV-BAGREYEV, A.M.

USSR 3

The forms of carbon dioxide [present] in champagne. A. M. Prolov-Bagreev. *Vinodelie i Vinogradarstvo S.S.S.R.* 12, No. 6, 20-1(1952).—A discussion. E. W.

FROLOV-BAGREYEV, A.M.

Microelements in the wine industry. A. M. Frolov-Bagreev and E. G. Andreevskaya (Technol. Inst. Food Ind., Moscow). *Vinodelie i. Vinogradarstvo S.S.S.R.* 15, No. 5, 12–13(1955).—Wines produced in different parts of the Soviet Union contain much Mn (Mn_3O_4 0.70–7.0 mg./l.) and B (B_2O_3 3.96–18.3); Mo (MoO_3 0.0015–0.150); V (V_2O_5 traces–0.860); Ti (TiO_2 0.970); and Ra 0.7–2.7 × 10^{-9} mg.

E. Markus

CH

FROLOV-BAGREYEV, A.M., professor, otvetstvennyy redaktor; NEGRUL', A.M., professor, zamestitel' otvetstvennogo redaktora; BLAGONRAVOV, P.P., kandidat sel'skokhozyaystvennykh nauk, zamestitel' otvetstvennogo redaktora; GERASIMOV, M.A., professor, redaktor; YEGOROV, V.I., redaktor; KARTAVCHENKO, P.K., kandidat sel'skokhozyaystvennykh nauk, redaktor; KATAR'YAN, T.G., kandidat biologicheskikh nauk, redaktor; POTAPENKO, Ya.I., kandidat sel'skokhozyaystvennykh nauk, redaktor; PROSTOSERDOV, N.N. professor, redaktor; TABIDZE, D.I., doktor sel'skokhozyaystvennykh nauk, redaktor; KHARITONOV, A.F., redaktor; KRUGLOVA, G.I., redaktor; KISINA, Ye.I., tekhnicheskiy redaktor.

[Ampelography of the U.S.S.R.] Ampelografiia SSSR. Red.kollegiia; A.M.Frolov-Bagreev i dr. Moskva, Gos.nauchno-tekhn.izd-vo M-va promyshl.prodovol'stvennykh tovarov SSSR. Vol.6. 1956. 432 p. (MLRA 10:6)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut vinodeliya i vinogradarstva "Magarach."
(Grapes--Varieties)

FROLOV-BAGREYEV, Anton Mikhaylovich, prof., doktor sel'sko-khoz.nauk, zasluzhennyy deyatel' nauki i tekhniki RSFSR [deceased]; AGABAL'YANTS, G.G., prof., doktor sel'sko-khoz.nauk, spetsred.; ORESHKIN, N.V., inzh., spetsred.; MASLOVA, Ye.F., red.; KISINA, Ye.I., tekhn.red.

[Chemistry and technology of wine] Trudy po khimii i tekhnologii vina. Vol.1. [Soviet champagne. Technical control in making table wines] Sovetskoe shampanskoe; Tekhnicheskii kontrol' v vinodelii stolovykh vin. 1958. 354 p. (MIRA 12:3)
(Wine and wine making)

FROLOV-BAGREYEV, A.M., prof., doktor sel'skokhoz.nauk; VECHER, A.S., prof., doktor biolog.nauk, spetsred.; BELIKOVA, L.S., red.; RESH, G.S., red.; GOTLIB, E.M., tekhn.red.

[Works in wine chemistry and production] Trudy po khimii i tekhnologii vina. Moskva, Pishchepromizdat. Vol.2. [Chemistry of grapes and products of their processing; selected articles] Khimiia vinograda i produktov ego pererabotki; izbrannye stat'i. 1959. 355 p. (MIRA 13:1)
(Wine and wine making) (Grapes)

FROLOVA, A.A.

USSR/Cultivated Plants - Fruits, Berries M-8

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1752

Author : A.A. Frolova
Inst : Not Given
Title : Problems of the Biology and Agrotechny of Gooseberries Under the Conditions Prevalent in the Zone of the Trans-Iliyskiy Alatau Foothills.

Orig Pub : Tr. Alma-Atinsk, botan. sada AN DazSSR, 1956, 3, 81-91

Abstract : During the years 1952-1955 the botanical garden of Alma-Ata has studied the biology and agrotechnical methods of many varieties of gooseberry, among others: the Krasnyy Altay No 40-34-6, Krasnyy Krupnyy No 21-39-1, Michurinets, Mysovskiy No 37 and Khauton; in the botanical garden, these varieties developed well, bore fruit in plenty, were resistant to frost, and not affected by sphaerotheca, and are recommended for large cultivation and propagation under conditions prevalent in the zone of the Trans-Iliyskiy Alatau foothills. Tests have shown that gooseberries have to be watered 7 times during vegetation; the best fertilization for

Card : 1/2